

MODULATION METHOD FOR SIGNAL CROSSTALK MITIGATION IN ELECTROSTATICALLY DRIVEN DEVICES

ABSTRACT OF THE DISCLOSURE

A method of distinguishing an analog drive signal from a pickoff signal for attenuating the effect of electrical cross-coupling between the analog drive signal and the pickoff signal. The method may include receiving a periodic digital signal at a first frequency in the form of a stream of digital data values, randomly inverting at least one of the digital data values and converting the stream of digital data values to a stream of analog data values to form an analog drive signal. The method may also include driving a sensor, physically coupled to a resonant member configured to oscillate at a second frequency, using the analog drive signal and sensing changes in the movement of the resonant member detected by the sensor for producing a pickoff signal.